TAMPEREEN TEKNILLINEN YLIOPISTO
TAMPERE UNIVERSITY OF TECHNOLOGY

LONDON SCHOOL OF ARTS IN SHOREDITCH

MASTER OF SCIENCE THESIS

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Abstract

MÄNTTÄRI, PASI MIKAEL: London School of Arts in Shoreditch

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The idea of the thesis rose from an international art school competition called London School of Arts in Shoreditch. The competition, that ended in December 2015, was organized by Italian STaRT for talents. The main goals of the competition were to design an art school which would bring out and improve the atmospheric, cultural and historical glory of Shoreditch. In addition, the building would not only work as an art school, but it also would be a meeting, debate, exhibition and workshop space for artists from all over the world. Participation in the competition was open to students and young professionals under 40 years old: architects, engineers or designers.

The main idea behind the building designed was straightforward: a building that would be a part of the Shoreditch atmospheric, artistic, historic and present values and routes, and which would in the same time interact with the surrounding cultural and built environment. In other words, allows the students, artists and residents of the area to be part of the building's design and encourages them to make it part of Shoreditch.

Many things inspired the building's design. However, the following key factors became the most important: street art and its cultural standing in Shoreditch, old warehouse and factory architecture of the area, the volumetric size of buildings in the surrounding built environment and the weather and atmospheric conditions in Shoreditch and London.

The thesis was split into two different parts: the competition phase and the improved design phase. The competition phase was focused on creating the basic idea, functions and design of the building. The improved design phase added and developed the presentation material and focused on the examination of the building's structural and technical design and specifications, such as fire safety.

The building composes of two main parts: an exterior brick canvas and a warm interior wood heart. These two parts have their own separate modifiable functions. All the buildings classrooms and laboratories were specifically designed for teaching and making art, and arranging exhibitions or events. The building contains four art laboratories, two auditoriums, two photography laboratories and four classrooms that can also be used as art laboratories or be combined to be used as a temporary art exhibition room.

One of the main aspects for the building design was to raise and improve the status of Shoreditch's current and historic and cultural image, atmosphere and style. Graffiti and street art have been, and still are, one of the biggest identifying features or traits of Shoreditch. Due to this, graffiti became an important part of the building and both its exterior and interior design.

Tiivistelmä

MÄNTTÄRI, PASI MIKAEL: London School of Arts in Shoreditch

Tampereen teknillinen yliopisto
Diplomityö, 45 sivua
Huhtikuu 2016
Arkkitehtuurin koulutusohjelma
Pääaine: Rakennussuunnittelu
Tarkastaja: Professori Ilmari Lahdelma

Avainsanat: Lontoo, Shoreditch, taide, koulu, graffiti

Lähtökohtana diplomityölle toimii Lontoon Shoreditchin alueelle suunniteltu kansainvälinen taidekoulukilpailu nimeltään London School of Arts in Shoreditch. Joulukuussa 2015 päättyneen kilpailun järjestäjänä toimi italialainen STaRT for talents. Suunnittelukilpailun päätavoitteina oli suunnitella ja luoda rakennus, joka toisi esille Shoreditch alueen hengen, kulttuurin ja historian loiston, ehostaen näitä elementtejä entisestään. Samalla rakennuksen haluttiin toimivan sekä kouluna että kokoontumis-, väittely-, työpaja-, ja näyttelypaikkana taiteilijoille ympäri maailmaa. Kansainvälinen kilpailu oli avoin nuorille alle 40-vuotiaille arkkitehdeille, suunnittelijoille, insinööreille sekä arkkitehtiopiskelijoille.

Taidekoulun perusideaksi muodostui ajatus rakennuksesta, joka olisi osa Shoreditchin taiteellista, arkkitehtuurista ja kulttuurillista perintöä, mutta samanaikaisesti olisi myös vuorovaikutuksessa tämän kaiken kanssa. Toisin sanoen, kannustaa alueen kulttuuria, ihmisiä ja taiteilijoita tekemään rakennuksesta heidän omansa.

Koulurakennuksen muotoiluun vaikuttivat monet asiat, mutta neljän voi sanoa nousseen tärkeimmiksi: 1) Shoreditchin katutaide- ja graffitikulttuurin, 2) alueen lukuisten vanhojen varastojen ja tehtaiden, 3) alueen rakennuskannan pienen raekoon ja suuremman rakennuksen yhdistämisen tähän ja 4) Lontoon ja erityisesti Shoreditchin tunnelman ja sääolosuhteiden.

Diplomityö jakautui kahteen osaan: kilpailuvaiheeseen ja jatkovaiheeseen. Kilpailuvaihe keskittyi rakennuksen perusidean ja ratkaisujen luomiseen, kun taas diplomityön jatkovaiheessa parannettiin rakennuksen esitysmateriaalia ja toimintaan liittyviä perusratkaisuja, sekä syvennyttiin tarkastelemaan rakennuksen rakenteiden ja teknisten ratkaisujen, esimerkiksi paloturvallisuuden, toteuttamismahdollisuuksia.

Rakennus muodostuu kahdesta eri osasta: ulkoisesta tiiliosasta eli ”maalauskankaasta”, joka toimii taitelijoiden maalausalustana, sekä puusydämestä, joka toimii rakennuksen kotoisana ja lämpimänä julkisena tilana. Molemmat osat rakennuksesta sisältävät erilaisia käytön mukaan muunneltavia ominaisuuksia. Koulun opetustilat on suunniteltu erityisesti taiteen opetukseen.

Rakennus sisältää kaksi kolmekerroksista taideluokkaa, kaksi auditoriota, kaksi valokuvausluokkaa ja neljä luokkahuonetta, joita on mahdollista käyttää myö taideluokkina tai ne voidaan yhdistää väliaikaiseksi taidenäyttelytilaksi.

Yksi rakennuksen pääideoista on Shoreditchin kulttuurisen ja historiallisen imagon, tunnelman ja tyylin nostattaminen. Graffiti- ja katutaide ovat olleet ja ovat nykypäivänäkin Shoreditchin suurimmat ja tunnetuimmat alueen määrittelevistä ominaispiirteistä. Tämän johdosta niistä tuli tärkeä osa rakennuksen muotoilua ja suunnitelmaa niin julkisivuissa kuin sisätiloissa.

TABLE OF CONTENTS

1. Introduction

The neighbourhood of Shoreditch used to be a busy factory area, but today almost all industry has left the area. The old factories have mostly been altered into apartment buildings, offices or galleries. After the destruction caused by the World War II and the so called rebirth of Shoreditch, the area has transformed into one the most liberal areas to live or visit in Great Britain. The area is especially popular amongst higher middle class, artists, architects and musicians. [1-3]

The site of the designed building is located out of plain sight from the bigger streets of Shoreditch, but it still maintains a central location in the area. There are several historically and otherwise important buildings near the building site, and two of them are very close. The first one, a brick built primary school, is adjacent to the building site. The second one, an old stone church, is only a stone's throw away situated adjacent to a busy market street called Hoxton Street. Most of the existing buildings close to the building site are somewhere between 50 to 200 years old. The surface area of the building site is approximately 1580 m^2.

The original space requirements of the competition were quite compact and the intent was to let the designers themselves expand and alter the space requirements as they saw fit. However, the space requirements were larger than the surface area of the building site, therefore a building with at least two stories was needed. The building of this thesis became to be about 2500 m^2 in surface area.

School architecture is slowly but steadily changing. Technology and new innovations will most likely keep changing it even more in the future and it is hard, if not impossible, to predict what changes will have to be made to architectural design of schools. However, there are some school types that are an exception to this. These school types have remained more or less the same as their space requirements, and other such factors, go hand in hand with the measurements of the built environment.

One of such types of school is an art school. Art schools, in order to function properly, need to have high room height and a lot of other functional qualities such as storage space. The art school in this thesis was designed and individualized based on the idea of not only making an excellent school, but an excellent art school.

The second chapter of this thesis explains and examines the built environment of the area, the location of the building site in respect to Shoreditch and the cultural and historic factors of the area. The most relevant cultural factors to the building were identified to be street art and graffiti, as the area is the unofficial street art center of Great Britain, if not the world.

The third chapter is all about the competition. The competition presentation boards are shown and the requirements and the goals of the competition are explained more thoroughly.

The fourth and the largest section is the last chapter of the thesis. In this chapter the design is explained in more detail and all the presentational and functional changes to the design since the competition are apparent. In comparison to the competition part of the thesis, this chapter of the thesis is more focused on the examination of the building's structural and technical design and specifications, such as fire safety.

2. Shoreditch - Streets of Art

Just north of the City of London, within the London Borough of Hackney, lies a neighbourhood of Shoreditch. It is an exciting neighbourhood with a rich and transformative artistic history. After a steady and long decline that had marked the history of Shoreditch in the 20th century, the nineties brought relief to the district and the area started to see a definite revival. [1]

During the Victorian era, partially due to the increase of music shows and plays that echoed in the theatres of Shoreditch, the area lived in the greatest splendour it had ever seen. [2] Sadly a huge part of these theatres were destroyed during the bombings of World War II. The first theatre in London, called the Theatre, was erected in Shoreditch and many famous writers and playwrights lived in the area, such as William Shakespeare. [3]

The late fashion designer Alexander McQueen once described Shoreditch as "desolate and rough". [4] Before the Nineties, Shoreditch was an area where few people lived and even fewer visited. After World War II, due to the advancements in manufacturing and the bombings that destroyed many of the factories in Shoreditch, the small industries that previously characterized the area moved out. The area was left with a huge number of empty warehouses, factories and other buildings with no people to fill them. However, Shoreditch has grown over the past 20 years and continues to do so. [1-3]

The social rebirth of Shoreditch was initiated by artists and intellectuals who arrived in Britain from all over the world. They chose this area to stay due to the area's low cost of rent. Word of these old factories and warehouses with large and cheap open spaces got around and attracted a large number of up-and-coming artists. Many of the artists who lived and live in Shoreditch were and are counted among the Young British Artists, a group known for their shock tactics and wild antics. [5; 11]

This young and provocative group quickly attracted other creative types, such as architects and filmmakers, to Shoreditch. In no time, the empty warehouses and factories started to be transformed into apartments, offices, galleries, grungy bars and music venues. [1; 5; 6]

Not long after that, the people of London of all varieties and classes started to flock to Shoreditch to live, work and enjoy. The interiors of the rich historical warehouses and factories were converted to loft apartments or offices. Among the classic Asian restaurants and staple eateries, trendy new bars and restaurants began to spring up. Shoreditch had been revived: it became the latest and greatest spot for a night out and the most fashionable of the boroughs in London to live, all the way from penniless students to young professionals, the city's elite, or celebrities alike. [1; 4-6]

Today it has become one of the coolest and most tolerant areas of London, with many middle and upper class people moving there and still pursuing to recover many old abandoned factories and warehouses. [1] To this date, Shoreditch has maintained its charm and stayed true to its rich and transformative artistic values and routes. A stroll down on any random alley in Shoreditch can quickly turn into a street art tour. The classic brick warehouse and factory architecture maintains a strong presence in Shoreditch and it can easily be noticed almost anywhere in the area.

2.1 Graffiti & Street Art

Graffiti is often described and associated as drawings, writings or paintings scratched, scribbled or painted illicitly on a wall or other surface. [7] The history of graffiti dates all the way back to the first civilizations in the world, such as Ancient Egypt, Ancient Greece and the Roman Empire, where graffiti were made on the walls and other surfaces of the cities.

Graffiti can range from simple written words to elaborate paintings and they often express underlying social or political messages often within public view. In one aspect however, graffiti is unique from other forms of art: it is always associated with the built environment and exists in a type of symbiosis with it.

Nowadays, in contradiction to what was mentioned before, graffiti isn't necessary always illegal. Many cities around the world have begun to designate graffiti areas in order to reduce the number of illicit and unwanted graffiti and to raise its status and positive image as a contemporary form of art and not something to be frowned upon. In modern times, graffiti has slowly started to take its rightful, but controversial, place as an actual distinguishable art form.

Shoreditch is the definite center of graffiti and street art in London. For example, this area is the only one in the city that has organized street art tours. According to some, it might even be the center of graffiti and street art of the world. The Hackey Post newspaper even features an interactive street art map on their website. [8]

"Shoreditch Street Art Tours provides the best expert tours of Shoreditch's street art, come on a tour and discover the culture, the artists, the locations and the stories that have lead to Shoreditch being the World's epicentre of street art." [9]

"Almost every day, at least one new street art piece pops up in Shoreditch, the area of London most populated by street art and graffiti." [8]


[10]

[11]


[11]

2.2 Location

Shoreditch is an inner city district in the historic East End of London and modern Central London, within the London Borough of Hackney. Its southern border is adjacent to the City of London.

The medieval parish of Shoreditch was once part of the county of Middlesex. The parish of Shoreditch remained local administrative until the year of 1899, after which a Metropolitan Borough of Shoreditch was created. Three districts were included in the borough: Shoreditch, Hoxton and Haggerston. The borough was administered from its own town hall, which still can be found at the east end of Old Street. In 1965, Shoreditch was incorporated into London Borough of Hackney. [12; 13]

Shoreditch used to have a reputation as the poor district of the East End. It had a lot of criminal activity, prostitution and social problems, but on the other hand it also had active culture life with theatres and variety-shows. For example, Charlie Chaplin used to perform there before moving to the United States. Theatres called The Theatre and The Curtain were also located in Shoreditch, which are known for Shakespeare's plays and acting. Gainsborough's studio, where Alfred Hitchcock started his career, was located in Hoxton, which is usually seen as part of Shoreditch. [13]

Nowadays Shoreditch is a trendy part of London, where offices and apartments have high cost per square meter. As it is with Williamsburg in New York or Punavuori in Helsinki, Shoreditch is often characterizes as the hipster district of London. [14]

London Undefined scale

Shoreditch 1:4000

The location of the designed building is between Hemsworth Street to the north and Ivy Street to the south. About a hundred meters to east is Hoxton Street and about the same distance to west is Pitfield Street. Hoxton Street functions as a market, restaurant and primary street in the middle of Shoreditch. On the other hand, alongside Pitfield Street there are mostly only residential buildings. Hemsworth Street is a dead end towards west and Ivy Street is a dead end towards east.

The site is a little bit remote and isolated from the larger and more lively Hoxton Street, which is understandable as the building is supposed to be a school and not entirely a public building such as a museum. In any situation, the designed building would be visible to the Hoxton Street only from the north end of the site.

The buildings adjacent or near the art school are mostly residential with occasional business spaces in the foundation levels of the buildings. However, there are also a couple notable public buildings. In the corner of Hoxton Street and Hemsworth Street, there is a Victorian stone church called St. Anne's. The church was built in the middle of 19th century. [15]

The other notable public building is adjacent to the Art School building site: Hoxton Garden Primary School. This Neo-Jacobean school building is built from of stock brick with red brick dressings, like many buildings in Shoreditch, and was built in late 1800s. Surprisingly the school also has a roof playground. The building still functions, to this date, as a primary school. [16]

Building Site 1:500

2.3 Site & Building Basis

The previously mentioned public buildings, especially Hoxton Garden Primary School, play a pivotal role in the building's design. The primary school must be taken into account as it is located adjacent to the art school building. The art school should not block out sun or the windows of the primary school. It would also be preferable to leave the view from the primary school to west at least partially intact.

Taking these into consideration, the building should stay as a low rise building or be built at the north end of the site. Building the art school at the north end of the site would lead the building to become a high rise building due to the space requirements. However, most of the buildings surrounding the site are no more than three stories high. An important thing to consider was also the number of rainy days in a year in London, making it crucial to consider the relation of the exterior and interior spaces between each other.

As the building is supposed to be a rather small school building, it was decided to proceed with an approach that blends the building into the existing built environment. The building is composed of 9 smaller brick blocks and one interior glass covered wooden block. The smaller brick blocks blend into the surrounding built environment and the wooden block gives the building a definite appearance of a public building. A courtyard was placed to the east side of the art school in order to make the narrow passage that formed there more open to sunlight and activities.

When arriving to the site from Hoxton Street, at first the only visible part of the building will be the main entrance, as seen on page 9. From the street between the St. Anne's Church and a business building, the distinguishable main entrance will be visible all the way to Hoxton Street, making the building easy to spot and approach from afar.

The pictures on this page are intended to show the important buildings close to the building site, the empty building site and the current condition of the area. The red area in the aerial picture marks the building site.

[11]

[11]

[17]

3. Competition & Goals

In the persistent process of growth in Shoreditch, the school of arts and its design are ways to motivate rebirth of the neighbourhood and strengthen the artistic values and routes of Shoreditch. The school is to be a meeting place for artists from all over the world, where debates, exhibitions and workshops will enliven the neighbourhood. The building and its architectural design will be something that upholds the return of Shoreditch to the glories of its past. [11]

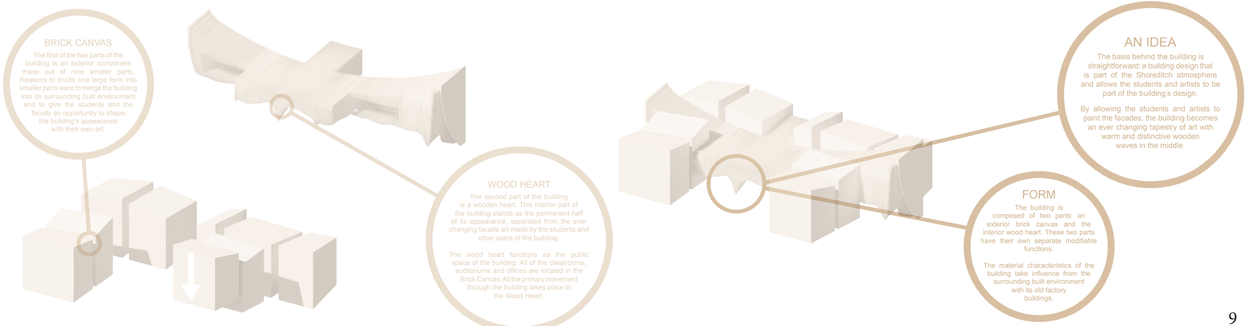
The goal of this work was to create a building that is part of Shoreditch's unique and vibrant atmosphere without breaking its historic identity, but still strengthening the existing contemporary cultural and artistic orientations of Shoreditch. In other words, the basis behind the building in this thesis is straightforward: a building design that is part of the Shoreditch atmosphere and allows the local art students and artists to be part of the building's design in a way that is characteristic to Shoreditch. [11]

The following functional requirements of the building were set forth by STaRT: 4 laboratory rooms (painting, sculpture, film, photography); 8 classrooms for lessons; 4 offices; a block of bathroom per floor; a deposit material room; a locker room for staff; a technical room; independent restaurant; hall & reception. These were given suggestions and were intended to be adaptable to different needs of the design. [11]

Participation in the competition was open to students and young professionals under 40: architects, engineers or designers. The competition was open to either individuals or groups. [11]

The competition presentation boards are in an undefined scale. The original size of the presentation boards is A0.

TEACHING	
Art Laboratory	745,5 m^2
Deposit Material	108,5 m^2
Classroom/Laboratory	276,0 m^2
Auditorium	163,0 m^2
FACULTY AND OTHER	
Office	98,5 m^2
Technical Room	167,0 m^2
Staff Locker Room	66,0 m^2
Cafe/Reception Hall	287,5 m^2
Other	527,5 m^2
TOTAL	2439,5 m^2
SITE SURFACE AREA	1579,0 m^2
CONSTRUCTION GROSS AREA	1098,0 m^2



2AREA

MAIN ENTRANCE

The building's main entrance is easily visible from both ends of the Hemsworth Street (as seen on page one).

The reception and all faculty premises are located on this side of the building.

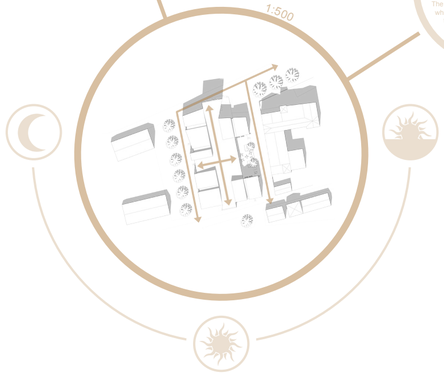
BEING PART OF SHOREDITCH

This whole facade is intended to be used as a graffiti canvas for the students and artists to paint, on, and practice their skills. Other brick facades have the same option, but it is up to the school faculty which facades will be painted upon.

MOVE

The movement in, past and through the site and the building has been made easy. There are two ways to get past the building from Hemsworth Street to Ivy Street and vice versa.

The school has four public entrances which all lead to the interior part of the building, the Wood Heart. The whole building is accessible.



The cafe terrace holds seating for several people and has two cherry trees to provide warm and soothing nature's ambiance into the otherwise man-made environment.

APPROPRIATE HEIGHT

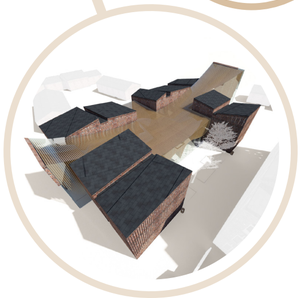
The school is a low rise building to prevent the adjacent primary school being left in shadows and to keep the cafe terrace well-lit by sunlight.

Since there is plenty of parking space on the surrounding streets, an additional visitor parking for the building was thought unnecessary. The faculty parking is preserved from the Hemsworth Street. A parking hall for the surrounding area however is easily incorporable to the building site.

BACK ENTRANCE

The entrance from Ivy Street functions as the secondary entrance to the building.

Temporary art exhibitions can easily be arranged here due to the auditoriums (see page 5). This side of the building can easily be operated independently from the rest of the building.



3TEACH

North Elevation 1:100

East Elevation 1:100

FACULTY

All the faculty premises, including locker rooms, toilets and offices are located at this part of the building. There is a separate entrance for the faculty.

Since the cafe can operate independently, the cafe staff has a separate locker room and toilet for their convenience.

Ground 1:100

DIVIDE

The building can simultaneously be used for separate events or exhibitions without disturbing one another. For example, the cafe and the reception area could be used to organise an event and the south end could still be used for teaching.

The building can be divided into three separate parts with sliding glass doors, which descend from the ceiling wood panelling.

AND SHARE!

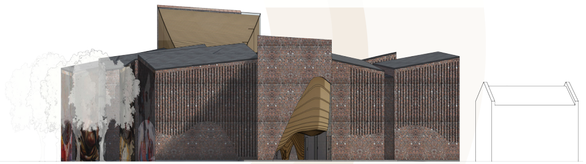
Each separated part (north, cafe and south) have their own toilets and other functional features to make possible for them to operate independently. The locations of these three descending glass doors are shown above.

ART LABORATORY

The building contains four art laboratories, two photography laboratories and four class rooms that can also be temporarily used as art laboratories.

Two of these art laboratories are two stories high (basement/ground floor), giving the students and artists an opportunity to work with tall sculptures or statues without the limitations of room height.

4LEARN



South Elevation 1:100

West Elevation 1:100

GRAFFITI

This facade is in its entirety meant for the students, artists and other users of the building to paint upon. All the brick facades of the building are suitable for painting and graffiti. The graffitis in the elevation are illustrative examples.

Second 1:100

OFFICE

The faculty office is an open-plan offices, with one single independent office room. The office has its own kitchen and is well lit with natural light.

The north-east end of the premises has visibility through the wooden panels to west and east as well as the part of the reception area below.

ART LABORATORY AND CLASSROOM

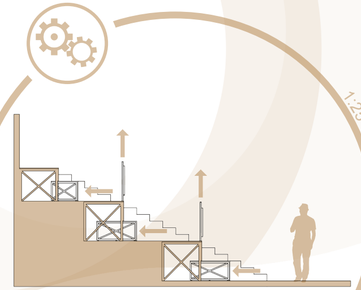
There are four classrooms in the building that in addition can be used as art laboratories. These classrooms have a sliding folding glass doors between them, making it possible to join the two classrooms. They can also be used for digital art teaching, in which case they are filled with tables, computers and printers.

MATERIALS AND STRUCTURE

The basic structural design is based on steel pillars and columns, brick walls and concrete.

All floors and half of the walls are smooth semi-gloss concrete. The rest are made out of brick.

5PAINT



1:25

The seating of the auditoriums is adjustable: every second row of seats can be pushed in. This allows the auditorium to be used as a temporary art exhibition room.

PHOTOGRAPHY

The photography laboratories are located underground to prevent any unwanted sunlight from entering the laboratories thus making lighting easy to control and adjust.

A darkroom has been included in the plan and it serves both photography laboratories. However, if not needed, it can be easily removed from the plan creating two slightly larger laboratories or one very big one.

Basement 1:100

ART EXHIBITION

Thanks to the withdrawable seats and removable steel handrails, the auditorium is easily and quickly adjustable to a small art exhibition room.

The paintings can be hung from the handrails or be placed on the platforms with their easels.

MATERIALS AND STRUCTURE

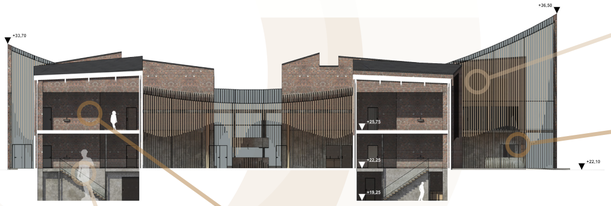
The steel structured seating is made out light weight concrete slabs with steel supporting. The slabs are also changeable if the school wants a clear concrete canvas (see the picture on the next page) for their students.

MATERIAL DEPOSIT

The building contains two material deposit rooms. These rooms are strategically located adjacent to the art and photography laboratories. The two story art laboratories also have their own doors straight into the deposit material rooms.

All material needs to be delivered by the elevators to ground and second floor. The elevators have been placed next to the deposit material rooms to allow easy access and movability throughout the building.

6SHAPE



Section A-A 1:100

COLOURS OF NIGHT AND DAY

The building looks very different by day and night (see pictures on pages 3 and 4). By night the glowing light slips through the slits on the facades and the gaps between the wood panelling. By day the effect is opposite and the sunlight slips inside through the slits and gaps.

RECEPTION AND VESTIBULE

The reception of the building and the back entrance hallway have been designed with enough room to be modifiable to fit a draught lobby if needed.

The reception includes a coat room to support organising art exhibitions and other events taking place in the building.

SCULPT

This laboratory is mostly intended for sculpting purposes. Therefore the room height is 6,2 meters. To transfer the sculptures and statues out of the room when they are finished, the room can be installed with openable floor and roof.

PAINT

This room is intended to be used in painting or in digital arts. If the school wants to use the room for digital arts teaching, it can be filled with computers and printing appliances.

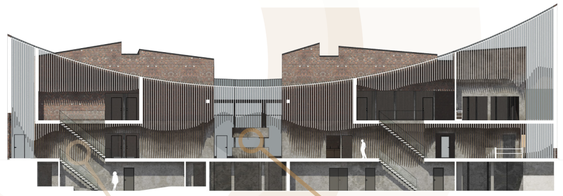
The room has more height than normal rooms, so it can also be used to paint massive paintings.

LEARN BY DOING

The seating in the auditorium is another platform in the building which can be used as a painting canvas. Not only can the students and artists organise art exhibitions here, they can also make the room into a one single piece of artwork!

The same idea can also be implemented elsewhere in the building on case-by-case basis.

7RELAX



Section B-B 1:100

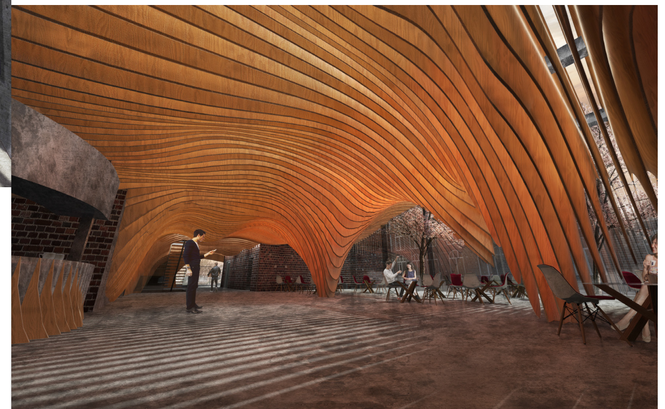
RAMPS AND STAIRWELLS

The stairs of the building are made from thick, solid hardwood board (same as the ceiling panelling), structural steel frame and glass handrails.

All the ramps have been designed as accessible: interior ramps have the angle of 7,5° and the exterior ramps have the maximum angle of 5° (most of them have less than this).

PRESENT YOUR WORK

The cafe can also function as a place to present artists' artwork. Paintings can be hung from ceiling (from every second gap which has lighting), creating a flowing non-temporary art exhibition space for every visitor to see.



EAT AND DRINK

The cafe is equipped with stove, coffee machines and everything else a small lunch cafe might need. When closed, the glass sliding door can be closed leaving the reception hall open to the other users of the building.

TEACHING

Art Laboratory	745,5 m²
Deposit Material	108,5 m²
Classroom/Laboratory	276,0 m²
Auditorium	163,0 m²

FACULTY AND OTHER

Office	98,5 m²
Technical Room	167,0 m²
Staff Locker Room	66,0 m²
Cafe/Reception Hall	287,5 m²
Other	527,5 m²
TOTAL	2439,5 m²
SITE SURFACE AREA	1579,0 m²
CONSTRUTCION GROSS AREA	1098,0 m²

A NIGHT TO REMEMBER

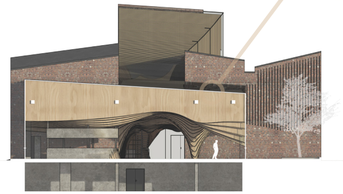
The reception hall and the connected cafe can be used to hold parties, celebrations, exhibitions and other events.

It is quite well suited for such activities due to its size, open plan, kitchen features and the characteristic ability to separate this part from the rest of the school if needed.

WAVES

The ceiling panelling is 25 mm thick solid hardwood board, glued together from several different parts. The spacing between the panels is 200 mm.

Interior lighting is installed into every second gap, giving the ceiling a distinctive and wavy appearance.



Section C-C 1:100

4. Building Design

The basis behind the building is straightforward: a building design that is part of the Shoreditch atmosphere and allows the students and artists to be part of the building's design.

The following key factors affected most to the building's design: street art and its cultural standing in Shoreditch, old warehouse and factory architecture of the area, the volumetric size of buildings in the surrounding built environment and the weather and atmospheric conditions in Shoreditch and London.

As it already became clear in chapter 2.1 of the thesis, street art and graffiti has strong cultural and atmospheric standing in Shoreditch and it should be strengthened.

The old warehouse and factory buildings in Shoreditch are mostly made out of brick and steel. Many of these buildings have been or are being transformed into homes or offices. Most of the buildings surrounding the site are low-rise apartment buildings. The art school building is blending into this environment even as it is much of a bigger building.

The building is composed of two parts: an exterior brick canvas and the interior wood heart. These two parts have their own separate modifiable functions.

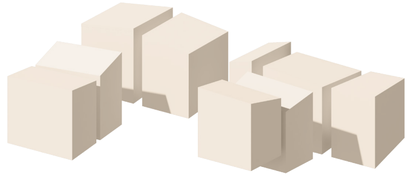
The first of the two parts of the building is an exterior brick component made out of nine smaller parts. Reasons to divide one large form into smaller parts were to merge the building into its surrounding built environment and to give the students, visiting artists and the faculty an opportunity to shape the building's appearance with their own art. This way the building becomes an ever changing tapestry of art with warm and distinctive wooden waves in the middle.

The second part of the building is a wooden heart. This interior part of the building stands as the permanent half of its appearance, separated from the ever changing facade art. The wood heart functions as the public space of the building. All of the classrooms, auditoriums and offices are located in the Brick Canvas. All the primary movement through the building takes place in the Wood Heart.

From the competition to thesis, the building design went through some changes. Some of them are recounted here. On the first floor, the two sides of the building were connected and the classrooms were made into a one big adjustable space. The basement floor went through the same changes and the halls were connected to one another on both sides of the building.

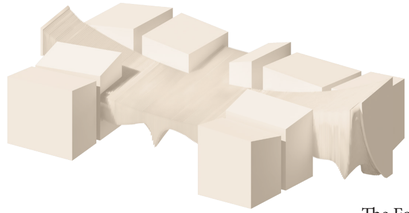
This space can also be used as an art exhibition room. The fire regulation and emergency exits were specified and upgraded. For example, all the floors of the art laboratory classrooms on the east side of the building were connected with stairs, creating a one big connected classroom.

In addition, some minor changes were made to the user-friendliness of the classrooms and other spaces in the building. For example, kitchens and toilets were added to the art laboratory classrooms mentioned above. Moreover, the use and functions of different spaces and classrooms in the building were specified and planned more thoroughly.



Brick Canvas

Wood Heart



The Form

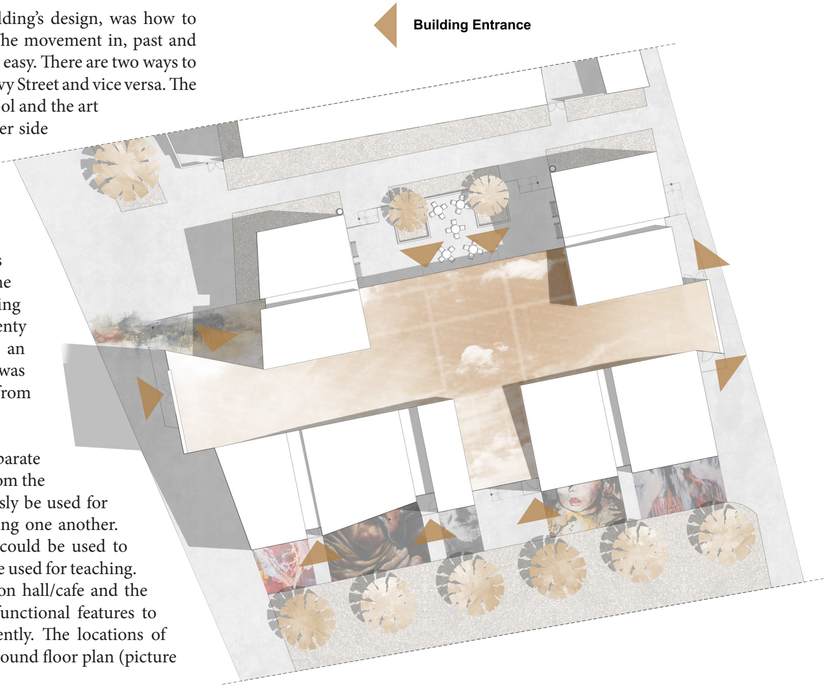
4.1 Building Features

One of the most important points in this building's design, was how to approach, get past and get into the building. The movement in, past and through the site and the building has been made easy. There are two ways to get past the building from Hemsworth Street to Ivy Street and vice versa. The path between the Hoxton Garden Primary School and the art school is more narrow than the one on the other side of the building, but offers a small terrace with tables and cafe to take a break. The path on the opposite side is, in addition to pedestrian traffic, meant for students and artists to paint upon (more on that later).

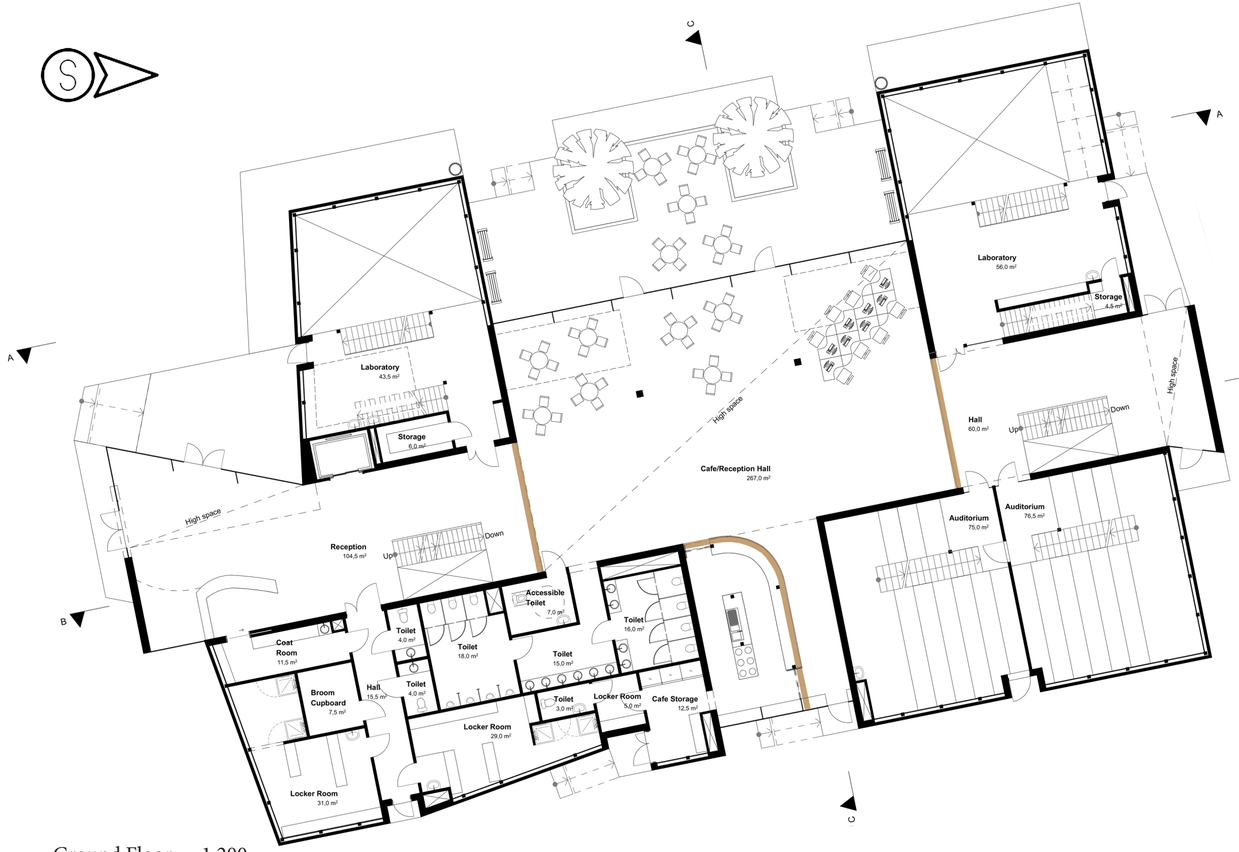
The school has four public entrances which all lead to the interior public part of the building, the Wood Heart. The whole building is accessible for the disabled. Since there is plenty of parking space on the surrounding streets, an additional visitor parking for the building was not required. The faculty parking is allocated from Hemsworth Street.

The art school can be divided into three separate parts with sliding glass doors, which descend from the ceiling. This way the building can simultaneously be used for separate events or exhibitions without disturbing one another. For example, the cafe and the reception area could be used to organise an event and the south end could still be used for teaching.

Each separated part, the north, reception hall/cafe and the south, have their own bathrooms and other functional features to make possible for them to operate independently. The locations of these three descending glass doors are on the ground floor plan (picture on page 19).



Site Plan 1:500



Ground Floor 1:200

4.2 Learning & Classrooms

The building contains four art laboratories, two auditoriums, two photography laboratories and four classrooms that can also be used as art laboratories or combined to be used as a temporary art exhibition room.

There are four classrooms in the building, which are more traditional classrooms. However, in addition they can also be used as art laboratories.

These classrooms have a sliding folding glass walls between them, making it possible to join the classrooms into a one big hall for events and exhibitions. The outermost panel of the folding glass wall is also designed to work as a door to allow quick and fast access even if the wall is closed. The walls of the classrooms are painted white to allow more conventional and traditional art exhibitions to be organized here.

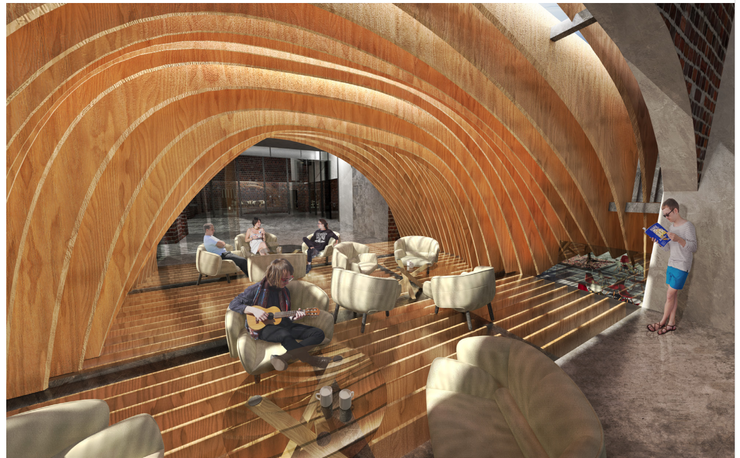
The classrooms are equipped with simple and easy-to-move furniture: computer and drawing tables, school chairs and such. The furniture must be easy to move, if an art exhibition or another event takes place there. The classrooms are also equipped with modern teaching aids, such as projection screens.

The basic idea is that all the classrooms and laboratories are free to be used by the students and artists at any time of day. This will allow an independent working environment conditions in the school in addition to traditional lecturing. The first floor room shown in the picture on this page is meant as a semi-public learning and rest area for students, artists and lecturers.

The ground floor art laboratories are connected with stairs to the first floor art laboratories, making it easier for the teacher to teach and instruct a different classes and projects at the same time. The ground floor art laboratories are two stories high (basement/ground floor), giving the students and artists an opportunity to work with tall sculptures, statues or paintings without the limitations of regular room height. When the works of art are finished, they can later on be moved from the laboratory rooms through an openable hatch in the floor to the first floor and to the roof.

All the photography laboratories were placed in the basement due to the required light and studio conditions. The photography laboratories will also feature a green screen room.

Furthermore, the building contains two material deposit rooms. These rooms are strategically located adjacent to the art and photography laboratories. The two story art laboratories also have their own doors to allow straight access into the deposit material rooms.



First Floor 1:200

All the photography laboratories were placed in the basement floor (as seen on page 23). When used correctly, natural light is always the best in photography. However, controllable light is more important in a studio situations as a specific atmosphere and lighting is wanted. The laboratory rooms in the basement are intended to be used with controllable artificial lighting and to teach the students how to use different kind of methods and artificial lighting to their professional benefit. In case natural lighting is needed, the other classrooms in the ground and the first floor can be used for that purpose.

The basement photography laboratories also include a green screen room and a dark room. The dark room can left out in the building's construction stage or it can be removed later on, if the faculty sees it as unnecessary. The green screen room is used for teaching the students how to use an important and widely used technique known as chroma key compositing. This technique is used in many fields such as news-casting, motion picture and video-game industries. [18]

The chroma key compositing is a special effects technique for compositing two images or video streams together based on colour hues. The technique is used to remove a background from the subject of a photo or video. Most often the background screen colour is green or blue, but any colour can be used as long as it is distinctive from the object or subject in front of it. [19]

Section A-A 1:200

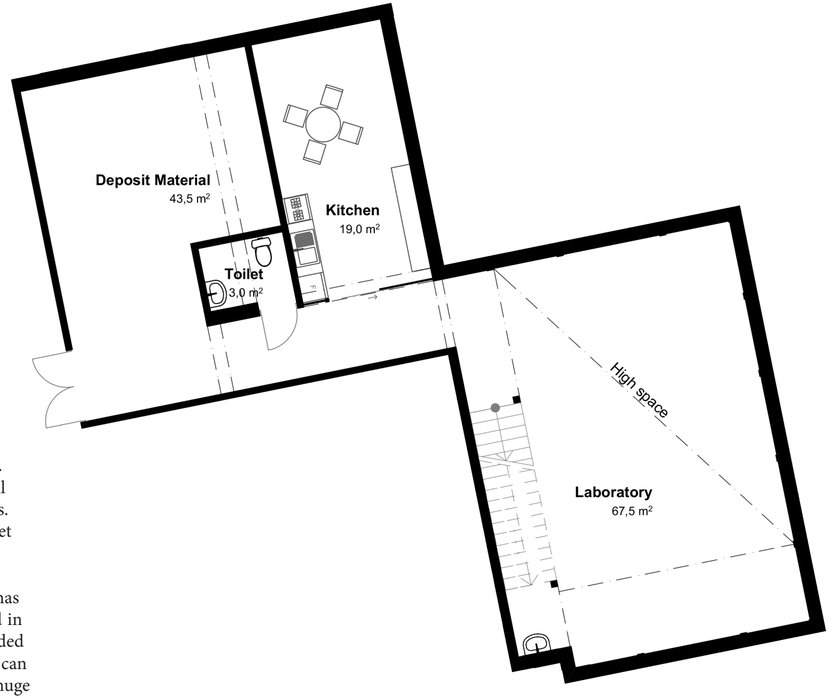
Basement 1:200

These art laboratory rooms are intended to be used in painting or sculpting. The rooms, especially the one in the basement/ ground level of the building, have more height than regular rooms, so they can be used to paint or sculpt massive works of art.

The room height in the basement/ground floor is 6,2 meters. The rooms have been installed with openable floor and roof to make it possible to transfer huge sculptures, statues and other works of art out of the rooms when they have been finished.

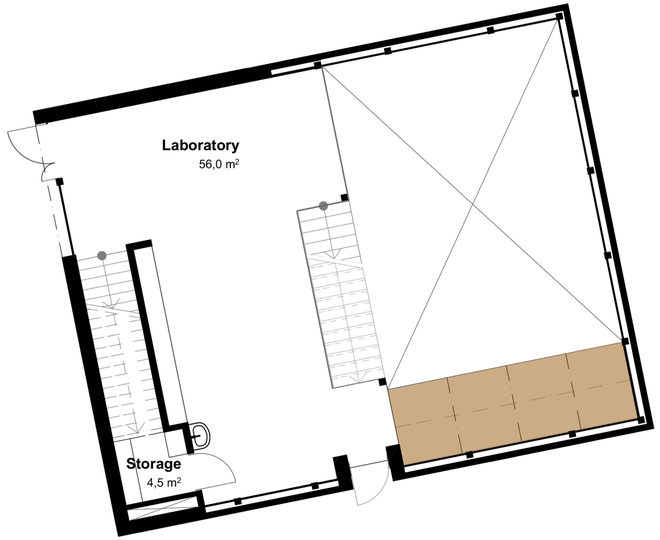
The rooms have direct access to the deposit material rooms to allow quick and easy access to materials or tools an artist might need. The rooms have also been installed with small kitchens for the convenience of the rooms' users. These kitchens have sandblasted glass roofs to let natural sunlight in.

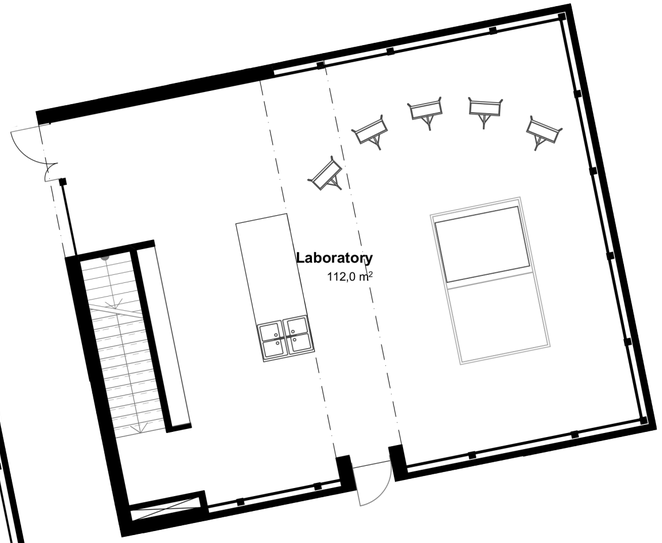
The ground floor of this art laboratory room has a modifiable feature: steel plates can be placed in slots on the steel pillars in order to create expanded platform (marked with brown). This platform can be used as a solid scaffold when working with huge statues and other projects. This way a separate scaffold is not needed, making work in the room safer.



Art Laboratory Basement 1:100

Art Laboratory Ground Floor 1:100





Art Laboratory First Floor 1:100

4.3 Learning & Graffiti

One of the main aspects for the building design was to raise and improve the status of Shoreditch's current and historic image, atmosphere and style. Graffiti and street art have been and still are one of the biggest identifying features or traits of Shoreditch. Due to this, graffiti became a part of the building and its design.

The facade, shown in the pictures on page 27, is in its entirety meant for the students, artists and other users of the building to paint upon. All the brick facades of the building are suitable for painting and graffiti, but it is decided by the school faculty which facades will be painted upon. The graffiti is a changing art form and the surfaces with paintings upon them will never stay the same for long. The basic idea is that with every new semester the graffiti would change with the new students and their ideas.

The graffiti in the elevations are illustrative examples and as seen there, they are meant to change and transform over the time. The pictures on the next page are illustration examples of what could be done with the west elevation if the school faculty decided to allow it to be filled with graffiti (at least the west elevation is recommended).

The building's brick facades were designed without large windows for this very reason. As the facades are meant to work as canvases for painters, they could have no windows at all or at most to have only narrow vertical slits on them. Vertical slits were chosen over no windows at all in order to make it possible for daylight to reach the interior spaces of the building and allow visibility out of the building.

To avoid the graffiti from becoming cluttered and to make each graffiti stand out from each other, the facade also had to have several separate canvases. This, and the general size of the built environment surrounding the building, led to the partitioning of the facades into several smaller parts.

The facade material was also chosen partially for graffiti and partially because the surrounding built environment is composed largely of brick buildings, such as old brick warehouses and factories.

The brick provides an excellent canvas for graffiti: it has a visible texture that can be seen through the paint and it also absorbs the paint, so that the graffiti will not fade rapidly. Also brick surface isn't smooth, consistent or the easiest surface to work on, therefore giving the students and artists an opportunity to learn and work on a surface with more difficult and different properties in contrary to normal painting canvases.

West Elevation - Examples of graffiti 1:200

West Elevation - Examples of graffiti 1:200

4.4 Public Space & Art Exhibitions

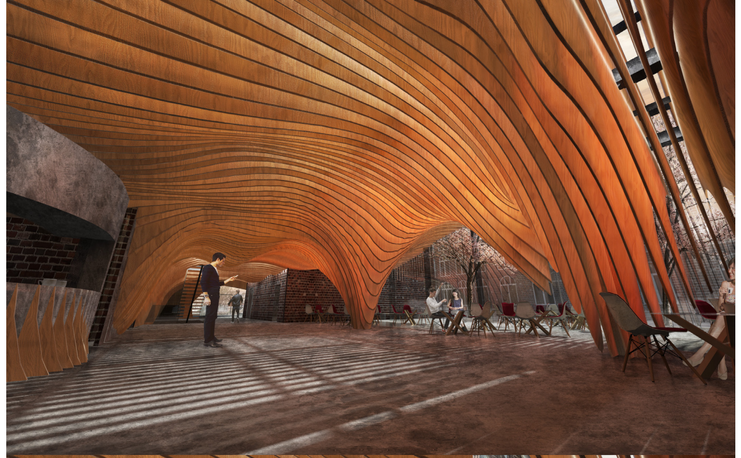
The interior wood heart takes influence from the older buildings of the surrounding area and turns it into contemporary form: brick or stone exterior, and wood interior. As it has already become clear, the wood heart functions as the public space of the building. In the north and south ends are entrance halls and functions such as bathrooms and a coat room. In the middle is the reception hall and cafe.

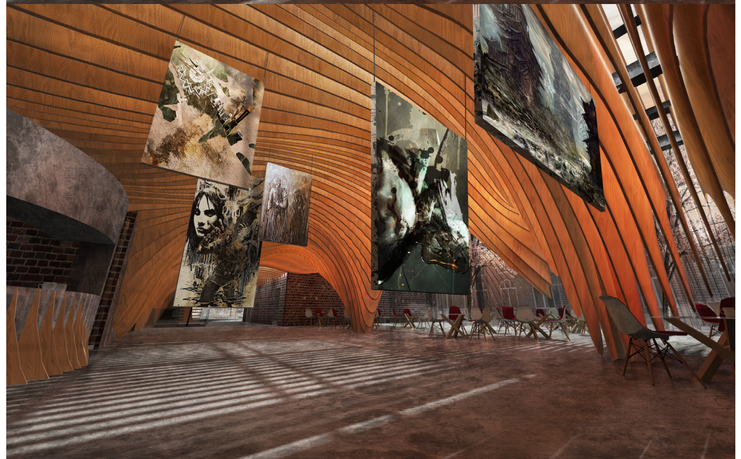
The cafe can also function as a place to present artists' artwork. Paintings can be hung from ceiling from every second gap which has lighting, thus creating a flowing non-temporary art exhibition space for every visitor to see. When the cafe is closed, the sliding glass doors can be closed leaving rest of the reception hall open to the other users or events, exhibitions or celebrations in the building.

The reception of the building and the back entrance hallway have been designed with enough room to be modifiable to fit a draught lobby if needed.

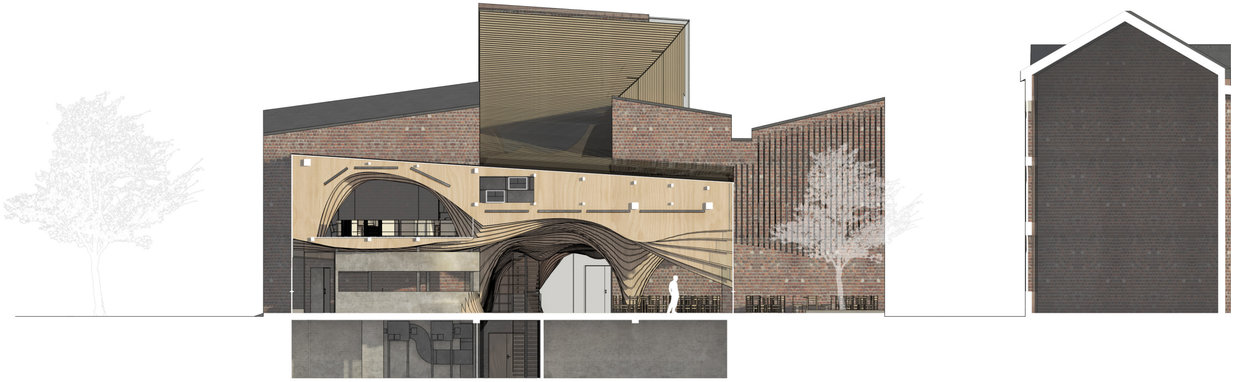
The reception hall is well suited for activities and events due to its size, open plan and the characteristic ability to separate this part from the rest of the school if needed. The reception includes a coat room to support organizing art exhibitions and other events taking place in the building.

The ceiling panelling is 25 mm thick solid birch hardwood board, glued together from several smaller parts. The spacing between the panels is 200 mm. Interior led lighting is installed into every second gap, giving the ceiling a distinctive wavy appearance and a feature to easily modify the hall's lighting even in detail level.





Section B-B 1:200



Section C-C 1:200

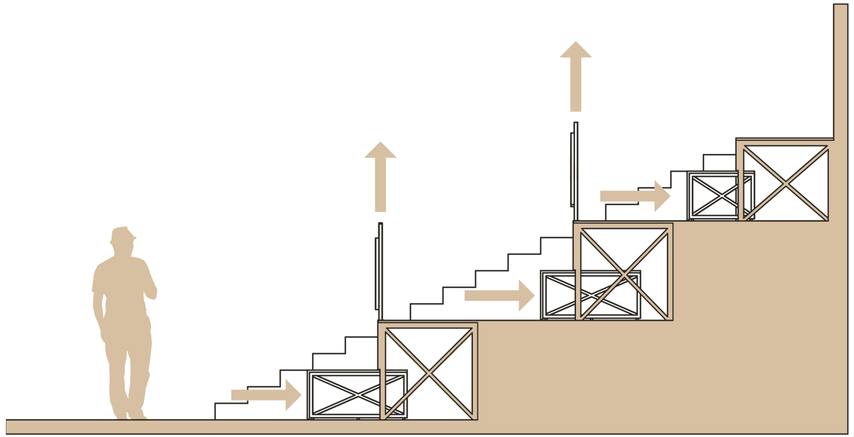
The seating of the auditoriums is adjustable: every second row of seats can be pushed in. This allows the auditorium to be used as a temporary art exhibition room or even as a temporary art laboratory. For example paintings can be hung from the handrails or be placed on the platforms with their easels.

The steel structured seating is made out light weight concrete slabs with steel supporting. The slabs are also changeable if the school wants a clear concrete canvas for their students.

The seating in the auditorium is another platform in the building which can be used as a painting canvas. Not only can the students and artists organise art exhibitions here, they can also make the room into a one single piece of artwork. The same idea can also be implemented elsewhere in the building on case-by-case basis.

All the classrooms and public spaces of the building are installed with appropriate computer connections. It is also possible to use some of the classrooms as computer laboratories if the school faculty sees it necessary. Public access computers have been placed in the cafe for the convenience of visitors and students alike.

The auditoriums were deliberately designed as plain and ascetic to allow either the rooms to be brought alive painting them or to be kept in their ascetic and plain form in order to function better as an art exhibition rooms. The picture on this page is an example of what can be done to the auditorium. Like everywhere else in the building, it is decided by the school faculty which surfaces in the building will be painted upon.



Adjustable auditorium seating 1:50

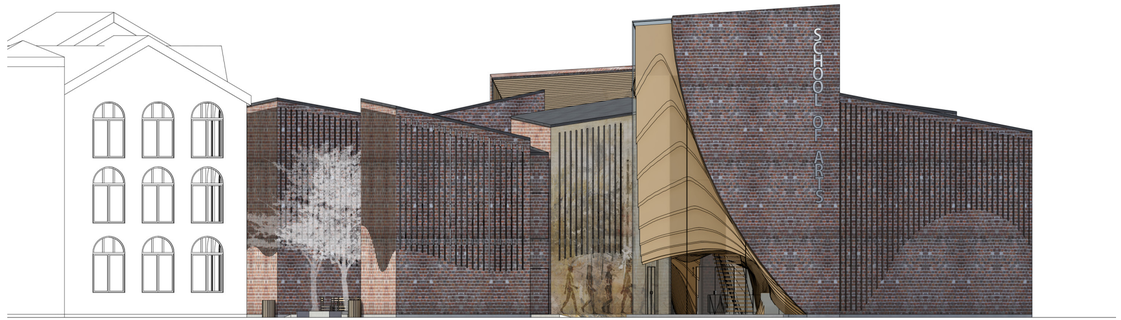
4.5 Building & Site Exterior

The wooden exterior and interior appearance of the building came from two different things: the need of sunlight in the interior spaces and the idea to create a building defining warm interior look and atmosphere, which would also be visible and present when observed outside of the building. This resulted in using wood panelling with the slits on the brick facades continuing the same pattern. The slits on the brick wall continue the wavy appearance of the wood panelling throughout the building's facades.

The material characteristics of the building take influence from the surrounding built environment with its old factory and warehouse buildings. Mainly three materials were used in the building's visual appearance: brick, wood and concrete.

The building looks very different depending on whether it is observed during the day or night time. By night the glowing light slips through the slits on the facades and the gaps between the wood panelling. By day the effect is opposite and the sunlight slips inside the building through the slits and gaps.

As it already became clear on the previous pages, the size of the individual pieces of the building was influenced by the existing built environment surrounding the art school site. The cafe terrace or courtyard was placed adjacent to the primary school to give both buildings better visibility and spacious feel. The only part of the building that is publicly visible from the market street called Hoxton Street, is the main entrance. The main entrance was given more height and visible approachable outlook for this very reason.



North Elevation 1:200

East Elevation 1:200

4.6 Fire Safety

The building has been designed by the fire regulations of Great Britain, which are a bit different to the regulations in Finland. [20] The fire safety of the building would be required to be checked by a government official.

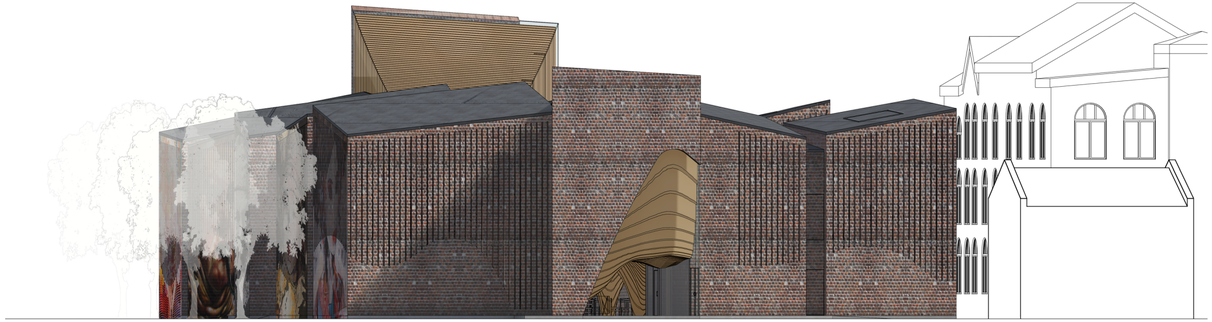
The fire safety of the building has two key factors: the first one is the sprinkler system that covers the whole building due to the huge number of flammable turpentine and other such substances and the wooden panelling (see Wood-Seal-A) of the public spaces; the second one is the emergency exit system of the building also featuring backup emergency exits on the ground floor and the first floor. One of these backup exits can be seen on the elevation picture on the next page. All of these exits have been disguised to be part of the facade and not stand out from the brick texture.

The buildings contains two primary emergency exits from the first floor. The art laboratories each contain their own emergency exit in addition to the primary emergency exits of the first floor. The building's staircases work as the emergency exits for the classrooms. Since there are two of them, the classrooms have the required two emergency exits even by Finnish standards. [21] The doors on the reception hall/cafe will close in case of a fire, or in case of more strict fire regulations, they can be changed into walls and normal doors to seal the compartment more throughoutly.

The staircase halls are isolated from the rest of the building with fire proof materials. The buildings emergency exits are no further than the maximum of 45 metres away from any room in the building. [22] They have also restricted usage: they can't be equipped with furniture and nothing is allowed to be placed underneath the lowering doors. The walls, floor, ceiling and reception desk are made out of non-flammable concrete and the required office equipment including one chair is allowed for the receptionist.

The coat room door closes automatically and is fire proof. All the wood in the staircase halls is applied with Wood Seal-A Fire Retardand to make the wood very fire resistant: minimal flame propagation, smoke evolution or afterglow. [23]

Basement 1:500



South Elevation 1:200

Ground Floor 1:500

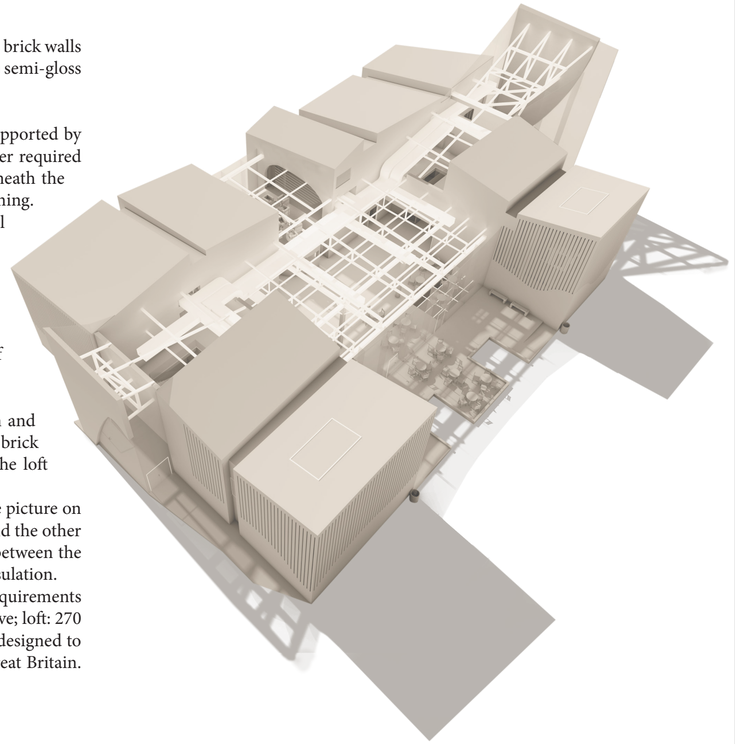
First Floor 1:500

4.7 Structural Design

The basic structural design is based on steel pillars and columns, brick walls and concrete. All floors and about a half of the walls are smooth semi-gloss concrete. The rest of the walls are made out of brick.

The glass roof of the wood heart and the wood panelling is supported by a steel framing (picture on this page). The ventilation and other required technical mechanics of the building are mostly hidden underneath the wood panelling and also being supported by the same steel framing. The steel framing is supported by two pillars in the reception hall and the wall structures.

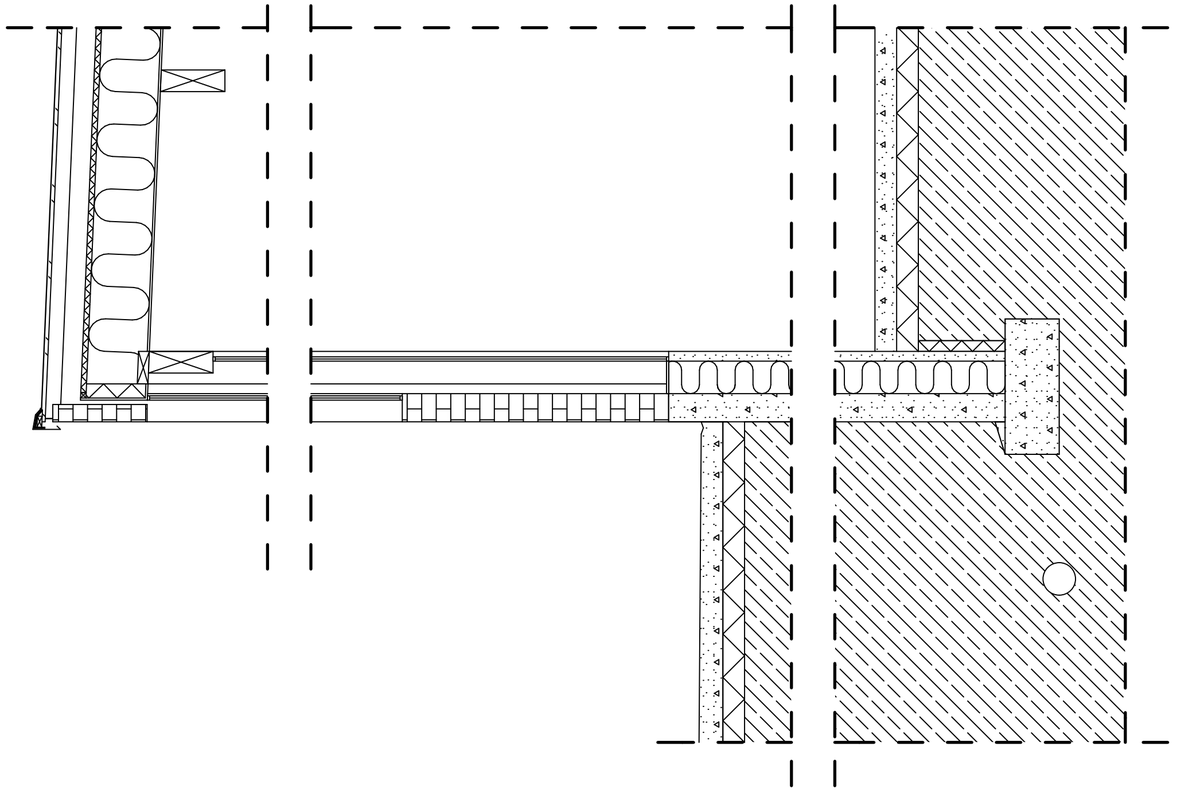
Moreover, all the glass floors in the building, basement kitchens and the first floor free learning area, are sand blasted to prevent visibility beyond few centimetres from the glass surface. All the roofs of the building are slanted outwards making the building less prone to the possibility of water damages.



The exterior wall is 300 mm thick with 150 mm of insulation and brick facade. The interior surface of the exterior wall is either brick tiling or concrete, depending on the room of the building. The loft (roof) insulation is 275 mm thick.

The exterior wall with slits is constructed as seen on the picture on the next page. It will have two glass surfaces, one inside a slit and the other one in level with the interior wall surface. This way the space between the two glass surfaces will not be littered and it will also work as insulation.

As the recommended minimum depth of insulation requirements in Great Britain (wall: 75 mm for normal and 225 mm for passive; loft: 270 mm) are different than in Finland. The walls and the loft were designed to exceed standard limitations of building structural design in Great Britain. [24]



Structure Section - Exterior Wall 1:20

4.8 Layout & Accessibility

TEACHING	
Art Laboratory	775,5 m^2
Deposit Material	93,0 m^2
Classroom/Laboratory	340,0 m^2
Auditorium	157,0 m^2
FACULTY AND OTHER	
Office	99,0 m^2
Technical Room	150,0 m^2
Staff Locker Room	65,0 m^2
Cafe/Reception Hall	287,5 m^2
Other	550,0 m^2
TOTAL	2517,0 m^2
SITE SURFACE AREA	1579,0 m^2
CONSTRUCTION GROSS AREA	1098,0 m^2

The inlets or ducts of the building have all been designed to be as invisible as possible in the layout plans of the building. Each water tap in the building has an inlet no further than few meters away.

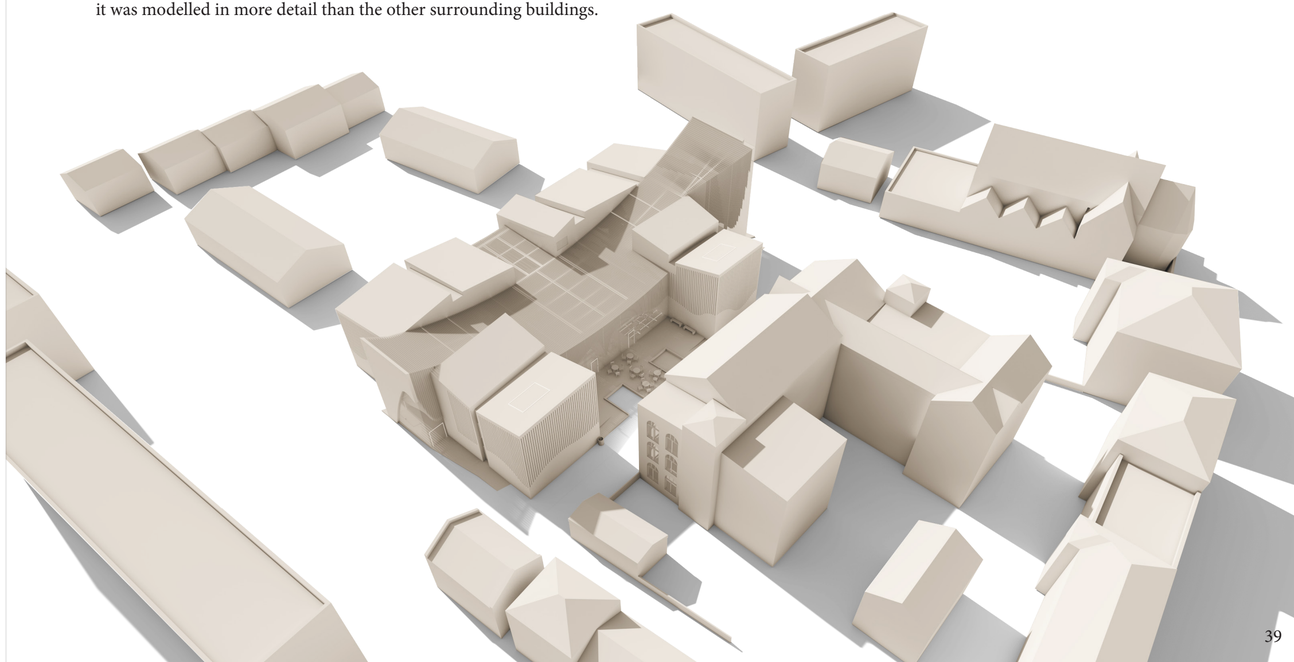
The ventilation of the building has its own inlet that goes straight up from the technical room to the glass roof. The glass roof is slanted outwards towards the courtyard. This will guide all the excess water from the ventilation away from the building making possibility of water damages due to the ventilation issues less likely.

Moving from the competition phase to the improved design phase, the second elevator in the southern staircase hall of the building was taken out since having two elevators in a building of this size was unrealistic due to its cost. The basement and the first floor's north and south sides were connected with each other by a hallway for this and other functional reasons.

The whole building and all the ramps have been designed as accessible: interior ramps have the angle of 7.5° and the exterior ramps have the maximum angle of 5°, even though most of them have less than this). These measurements are below the required maximum angle of ramps. [25]

4.9 3D Modelling

The 3D modelling of the building was mostly made using ArchiCAD, 3ds Max, Rhinoceros 3D Workshop and Revit. The building model was made all the way to a level of details and the basic forms of the surrounding buildings were examined and modelled. Since the Hoxton Garden Primary School is adjacent to the building site and is an important public building of the area, it was modelled in more detail than the other surrounding buildings.



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